CHAMINADE UNIVERSITY
PHY-151L: UNIVERSITY PHYSICS I LABORATORY
COURSE SYLLABUS – FALL 2010

Instructor: Eric Dodson
Email Address: eric.dodson@chaminade.edu
Office: Wesselkamper 110
Office Phone: 739-8363
Office Hours: M, Tu, W, F 1-2 PM and by appointment
Course Time: Thursday 11:00 AM – 1:50 PM
Course Room: Henry Hall room L10
Prerequisites: Concurrent PHY-151 is assumed.
Required Text: None. Handouts will be provided.
Other Materials: Scientific Calculator

COURSE DESCRIPTION:

This is an introduction to laboratory techniques and experiments that illustrate and apply basic physics principles presented in lecture. Students will have the opportunity to apply the scientific method in collecting and analyzing data.

COURSE OBJECTIVES:

Upon successful completion of the course, students will be able to:

- Make careful measurements of physical quantities such as distance, time, force, and velocity using various scientific instruments.
- Estimate the uncertainties and demonstrate a knowledge of statistical analysis.
- Present results graphically and make calculations using a computer when appropriate.
- Prepare technical material in writing.

EVALUATIONS AND GRADING SCALE:

Worksheet Labs Reports (12) 60%
Formal Lab Reports (2) 20%
Quizzes 20%

90% – 100% . . . . . A
80% – 90% . . . . . B
70% – 80% C
60% – 70% . . . . . D
0% – 60% . . . . . F

Incomplete grades (I) will be given in accordance with college regulations as outlined in the college catalog. Withdrawals (W) from the class are the responsibility of the student and deadlines are set by the college.

LAB REPORTS:
There are fourteen labs during the semester. Twelve of them will be in the form of worksheets. These labs should be competed in class and turned-in before leaving. Two of the labs will be prepared in more detail. These formal lab reports are essentially scaled-down versions of a scientific paper, reporting on the results of an experiment that you and your lab partner have carried out. Key sections of the report will include: abstract, introduction, procedure, results, and conclusions.

Although students will work in groups on experiments, lab assignments are individual preparations. Each student is responsible for their own interpretation of results.

ATTENDANCE:
Each students is expected to attend every lab. Arrive on time. Makeup labs will only be given under extenuating circumstances beyond the student's control. If a student knows in advance of an absence, inform the instructor as soon as possible.

Quizzes:
A ten to fifteen minute quiz will be given at the beginning of selected labs. I will announce the topic of the quiz the preceding week.

TENTATIVE SCHEDULE:

1	Aug 26	Lab 1: Units and Significant Figures
2	Sep 02	Lab 2: Acceleration of Gravity
3	Sep 09	Lab 3: Motion of a Ball
4	Sep 16	Lab 4: Projectile Motion I
5	Sep 23	Lab 5: Projectile Motion II
6	Sep 30	Lab 6: Friction (formal)
7	Oct 07	Lab 7: Cart Dynamics
8	Oct 14	Lab 8: Collisions
9	Oct 21	Lab 9: Impulse and Momentum
10	Oct 28	Lab 10: Statics
11	Nov 04	Lab 11: Hooke's Law
12	Nov 11	Lab 12: Simple Harmonic Motion (formal)
13	Nov 18	Lab 13: Buoyancy
14	Nov 25	Thanksgiving
15	Dec 02	Lab 14: Specific Heat